Title of Lesson: Fish Count

Subject: Math

Grade Level: 1

Teacher: Karen Moede

Objectives:

1. The student will solve 4 out of 5 math facts using manipulatives.

2. Students will fill out the T-chart with the correct groups of numbers that produce a sum of 7, 8, or 9.

SCSDE Curriculum Standards Addressed:

**Standard 1-1**  
The student will understand and utilize the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation.

Indicator 1-1.1: Apply substantive mathematical problem-solving strategies

Indicator 1-1.3: Explain and justify answers to simple problems.

Indicator 1-1.8: Use multiple informal representations to convey mathematical ideas.

**Standard 1-2**The student will demonstrate through the mathematical processes a sense of quantity and numeral relationships; the relationships among addition, subtraction, and related basic facts; and the connections among numeric, oral, and written-word forms of whole numbers.

Indicator 1-2.6: Recall basic addition facts through 9 + 9 and corresponding subtraction facts.

**Standard 1-3**The student will demonstrate through the mathematical processes a sense of numeric patterns, the relationship between addition and subtraction, and change over time.  
 Indicators 1-3.1: Analyze numeric patterns in addition and subtraction to develop strategies for acquiring basic facts.

Prerequisites:

1. Students should understand the concept of numbers 1-9.

2. Students should be able to solve basic math facts through number 9.

3. Students should be able to plug numbers into a math sentence.

Materials/Preparation:

*Materials for the Whole Class:*

T-Chart on the Smartboard

9 Fish

2 bowls

Tape

*Materials for Each Student:*

9 Fish (dye cut) per student

2 Paper Bowls per student (one labeled A and one labeled B)

3 T-charts per student (Label one 7, one 8 and one 9)

*Materials for the 4 Small Groups*:

5 math sentence cards (different problems that add up to 7,8 or 9)

*Materials for the Advanced Group:*

5 math sentence cards (different problems that add up to any number between 10 and 20)

20 Fish (dye cut) per student

Procedures:

**Engage**

1. Get the class focused on grouping by playing a grouping game.

2. In order to prepare for the game run a line of tape down the middle of the classroom.

Make one side with an A in tape and the other side with a B in tape.

3. Ask the students to count the number of children in the class.

4. Explain to the students that we will be practicing making groups. Explain that you will ask a question and the students will respond by moving to either side of the line.

Questions:

A. Do you like vanilla or chocolate?   
 (If you like vanilla go to the A side, if you like chocolate go to the B side)

B. Do you like Clemson or University of South Carolina?  
 (If you like Clemson go to the A side, if you like South Carolina go to the B side)

C. Do you like the mountains or the beach?

(If you like the mountains go to the A side, if you like the beaches go to the B side)

5. After each question that is asked, have the students count the number of students in each group.

6. Repeat that there is X number of children who like (chocolate, Clemson, the mountains) and X number of children who like (vanilla, University of South Carolina, the beach).

7. Ask the students if there is still X number of students in the class.

8. Ask the students if they think that X number in group A and X number in Group B makes the X or total number of students in the class.

**Investigate**

1. Remind the students that they have been working on adding numbers together. Explain that today we are going to take it a step further and find out what numbers added together equal 7, 8,or 9.

2. Give each child 7 fish and 2 bowls.

3. Have the students count the number of fish.

4. Tell the students that they may put the fish in the bowls however they choose, but all fish need to be in either bowl A or bowl B.

5. Ask the students to share how many fish they had in bowl A and how many fish they had in bowl B.

6. Record what the student says on the T-chart.

Bowl A Bowl B

|  |  |
| --- | --- |
|  |  |
| 0  1  2  3  4  5  6  7 | 7  6  5  4  3  2  1  0 |

7. Ask the students if there were still 7 total (If we combine both bowls together are there still 7?)

8. Continue to have students share the number they had in each bowl until all combinations are recorded.

9. Ask the students if there is a way to make a math problem out of the numbers found.

10. Guide the students by asking questions such as:

What two numbers made 7?

What type of problem is it? (Addition or Subtraction?)

How can we write that?

What symbols do we need to use?

11. Give each student another fish.

12. Repeat steps 3-10. This time use 8 instead of 7.

13. Give each student another fish.

14. Repeat steps 3-10. This time use 9 instead of 7.

15. Break the students into small groups of 4 and one advanced group of 3 (Ahead of time).

16. Explain to the students they will be given math fact cards and will have to find the solution to the math sentence.

17. Demonstrate to the class that when using a math fact, each number represents one bowl. So if we have 2 + 3 =, Ask:

How many fish go in bowl A? (Answer – 2)  
 How many fish go in bowl B? (Answer 3)

If we combine them how many do we get?

(Count them together as a class – Answer = 5)

18. Tell the students to get into groups and assign an area of the room to each group.

19. They can take their bowls and fish with them in order to find the solution and a piece of paper.

20. Have the students copy the math fact and write the solution next to it on their own paper.

21. Give each group a set of 5 math fact cards.

22. Have the students work together to find the solution. Encourage every student to put the fish into each bowl and then combine them.

23. Take the advanced group aside and explain to them that they have numbers greater than 7-9.

24. Give them each 11 more fish, so they have 20 each.

25. Allow all groups to experiment and try and find the solution, without guiding them.

26. Monitor each group and if a group is having trouble guide the students by asking:

How many fish should go in each bowl?

How many should go in bowl A?

How many should go in bowl B?

How do we combine them?

27. As groups finish, check the solutions.

**Reflect**

1. Have the students return to their desks.

2. Explain that we are going to play a game called Around the World.

3. Have two students stand up and show them one of the math fact cards.

4. Have them yell out the answer as soon as they know it.

5. The student that yells out the answer first will then race against another child to answer a math fact.

6. The challenge is to get around the entire room answering all the math facts first.

Assessment:  
**Formative Assessment**

Done during engagement (will record on a clipboard)

A. How the class counts the number of students in the class.

B. How high the students can count as a class.

Done during reflection (will record on a clipboard)

A. How the small group solves the problems (what strategy was used)

B. Did the students combine the numbers to find the solution?

C. Did the students use one to one correspondence when solving the problem?

**Summative Assessment**  
Collect written group work math problems:

A. Were students able to find the correct solution?

B. Were students able to write the math sentence appropriately?

Collect the number T-charts:

A. Did students record all possible groupings?

B. Did students find a majority of the possible groupings?

Adaptions:

1. For my more advanced students, during group work the students will still solve addition problems, but with larger numbers.

2. For my English as Second Language students, they are given manipulatives to make the lesson more concrete.

Follow-Up Lesson Activities:

1. Give the students the flash cards to use in the math center during center time.

2. Make a flipchart. Put two different bowls on the screen with certain number of fish in each bowl. Have the students right a math sentence. Give the students multiple numbers and symbols to choose from and make the incorrect answers bounce out of the boxes drawn for the math sentence.

Reflection: